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RACE AND PERCEIVED RACISM, EDUCATION, AND HYPERTENSION AMONG BRAZILIAN CIVIL SERVANTS. *E Faerstein, D Chor, G Werneck, C Lopes, J Lynch, G Kaplan (State University of Rio de Janeiro, Brazil 20550-900)

Brazil has the largest population of African descendants outside Africa. Because of the imprint of slavery on contemporary social position, we investigated the relationship of perceived racism to hypertension. We analyzed data (1999-2001) from 3,096 civil servants (mean age 42 years; 56% females) at university campuses in Rio participating in the longitudinal Pró-Saúde Study. Cases of prevalent hypertension had measured blood pressure equal or greater than 140/90 mm Hg or used anti-hypertensive medication. Self-administered questionnaires assessed perceived history of lifetime discrimination due to personal traits (race, gender, social class etc), at work, neighborhood, school, public places, and with the police. Participants used 30 terms as responses to an open-ended question on racial self-identification; for these analyses, 48% were grouped as African descendants. Perceived racial discrimination in at least one setting was reported by 14% of African descendants (25% of blacks, 5% of mulattos). Compared to Whites, the age- and gender-adjusted odds of having hypertension was higher for African descendants with a history of perceived racism (odds ratio (OR) = 2.1, 95% confidence interval (CI): 1.5, 3.0) than for those with no such history (OR = 1.5, 95% CI: 1.2, 1.8). Among the former, the adjusted association was stronger for those with elementary education (OR = 3.0, 95% CI: 1.3, 6.7) than for those with a college degree (OR = 1.7, 95% CI: 1.0, 3.1). Racism may increase the risk of hypertension of African descendants in Brazil, and socioeconomic disadvantage - also influenced by societal racism - may further potentiate this increased risk.

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MELATONIN AND BREAST CANCER: A PROSPECTIVE STUDY. *R C Travis, D S Allen, I S Fentiman, T J Key (University of Oxford, Oxford, OX2 6HE, UK)

To determine whether low levels of endogenous melatonin increase the risk for developing breast cancer, we conducted a prospective nested case-control study among British women. Concentrations of 6-sulfatoxymelatonin, the main metabolite of melatonin in urine and a validated marker of circulating melatonin levels, were measured by radioimmunoassay in 24-hour urine samples from women participating in the Guernsey Cohort Study. Levels of 6-sulfatoxymelatonin were compared among 127 patients diagnosed with breast cancer after urine collection and 353 control subjects, matched for age, recruitment date, menopausal status, and day of menstrual cycle (premenopausal women) or number of years postmenopausal (postmenopausal women). No statistically significant differences in 6-sulfatoxymelatonin urinary concentration were observed between women who subsequently developed breast cancer and their control subjects, among either premenopausal or postmenopausal women ($p = 0.8$ and $p = 0.9$, respectively). When data from premenopausal and postmenopausal women were combined in a multivariable analysis adjusted for reproductive, anthropometric and other factors, 6-sulfatoxymelatonin concentration was not significantly associated with the risk of breast cancer (odds ratio [OR] for breast cancer = 0.95, 95% confidence interval [CI] = 0.55, 1.65, comparing the middle third with the bottom third of 6-sulfatoxymelatonin concentration, and OR = 0.99, 95% CI = 0.58, 1.70, comparing the top third with the bottom third). We find little or no evidence that the level of melatonin in a 24-hour urine sample is associated with the risk for breast cancer.

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RACIAL DISCRIMINATION AND SELF-REPORTED HEALTH IN CARDIA: THE ROLE OF SOCIOECONOMIC POSITION AND SKIN COLOR. *L N Borrell, C I Kiefe, D R Williams, A V Diez-Roux, and P Gordon-Larsen (Columbia University, New York, NY 10032)

To assess whether perception of racial discrimination is associated with self-reported physical and mental health status before and after adjusting for socioeconomic indicators (SEI, family income and education), we analyzed data on 1722 African Americans (AAs) and 1935 whites participating in the Year 15 follow-up of CARDIA, a longitudinal study of the evolution of cardiovascular risk in young adults. Further, we examined whether skin color, measured by reflectance, modifies the effect of SEI on the racial discrimination/health status association. We assessed physical and mental health through standardized scores based on the SF-12 instrument (lower values = worse health). Mean age was 40 years. AAs had lower mean income, education, and health status. Perceived racial discrimination, a continuous score summing 7 questions, was higher in AAs than whites (mean 4.34 vs. 0.55, p -value <0.001). Physical and mental health scores decreased as perceived discrimination increased in AAs (linear regression coefficients -0.15 and -0.42, p -value <0.001 for both) and whites (-0.57 and -0.86, p -value <0.0001 for both). For AAs, there were further decreases in scores after adjustment for age, gender, income, education and skin color, but for whites, decreases were reduced. In summary, racial discrimination, reported more frequently by AAs than whites, is associated with worse self-reported health in both ethnic groups. SEI and skin color strengthen the association in AAs, but not in whites.

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PESTICIDE USE AND BREAST CANCER RISK AMONG FARMERS' WIVES IN THE AGRICULTURAL HEALTH STUDY. *L S Engel, D A Hill, J A Hoppin, J H Lubin, C F Lynch, J Pierce, C Samanic, D P Sandler, A Blair, M C Alavanja (Division of Cancer Epidemiology and Genetics, National Cancer Institute, NIH, DHHS, Rockville, MD 20892)

The authors examined the association between pesticide exposure and breast cancer risk among farmers' wives in a large prospective cohort in Iowa and North Carolina. Participants were 16,916 women who reported ever use of pesticides and had no history of breast cancer prior to cohort enrollment in 1993-1997. Through 2000, 157 breast cancer cases were diagnosed. Pesticide use information was obtained at enrollment from the participants ("direct exposures") and their husbands ("indirect exposures") and adjusted odds ratios and 95% confidence intervals were calculated using logistic regression. While there were suggestions of increased risk associated with exposure to certain pesticides, little consistency in risk estimates was observed between states of residence or between direct and indirect exposures. There was no evidence of exposure-response trends based on cumulative indirect exposures to any pesticides. Risk was not associated with distance of the home from areas where pesticides were applied or with washing of clothes worn during pesticide application. Although pesticide exposure did not appear to be an important risk factor for breast cancer in this study, some findings, especially those indicating consistency between exposure subgroups or suggesting a dose-response relation, warrant further investigation. Further years of follow-up of this cohort should help clarify the relationship between pesticide exposure and breast cancer risk.